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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,189	04/19/2001	Mark E. Zappi	2343-114-27	1194

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EXAMINER	
CINTINS, IVARS C	
ART UNIT	**PAPER NUMBER**
1724	

DATE MAILED: 12/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/837,189	ZAPPI ET AL.	
	Examiner	Art Unit	
	Ivars C. Cintins	1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 September 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) *10* is/are withdrawn from consideration.

5)☒ Claim(s) *15* is/are allowed.

6)☒ Claim(s) *1-9 and 11-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 4, 6-9, 11, 13 and 14 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Haase et al. (U.S. Patent No. 4,178,438; hereinafter "Haase") in view of Wieser-Linhart (U.S. Patent No. 5,762,662). As pointed out in the previous Office action, Haase discloses removing soluble organic contaminants of the type recited (see col. 13, line 23 through col. 14, line 49) from a fluid such as water (see col. 1, line 12) with a cellulose based (col. 13, lines 1-7) adsorbent (col. 2, line 32) packed in a column (see col. 2, line 44). This reference further teaches that up to 100% of the dissolved impurities can be removed from the contaminated fluid (see col. 14, lines 50-52). Accordingly, this primary reference discloses the claimed invention with the exception of the recited composting treatment. Wieser-Linhart discloses a similar process for adsorbing organic contaminants from a liquid (see col. 1, line 47) with a cellulose based material (see col. 1, line 53; and col. 2, line 6), and further teaches (see col. 2, lines 15-17) disposing of the residual material by composting. It would have been obvious to one of ordinary skill in the art at the time the invention was made to compost the spent adsorbent material of Haase, as suggested by Wieser-Linhart, in order to dispose of this spent adsorbent material. Also, it would have been obvious to one of ordinary skill in the art at the time the invention was made to reduce over 50% of spent material in the modified primary reference, as recited in claim 11, in order to optimize disposal of this spent material. Furthermore, since Applicant has not shown that the

cationic modifier employed by Haase would materially change the characteristics of Applicant's invention, the "consisting essentially of" language recited in line 4 of claim 1 has been construed as equivalent to "comprising."

Claim 3 is again rejected under 35 U.S.C. 103(a) as being unpatentable over Haase in view of Wieser-Linhart as applied above, and further in view of Sato et al. (U.S. Patent No. 4,206,080; hereinafter "Sato"). As pointed out in the previous Office action, the modified primary reference discloses the claimed invention with the exception of the flow direction through the column. Sato teaches that contaminated water may be passed through a column of adsorbent material in either an upward or a downward direction (see col. 4, line 14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to pass the water undergoing treatment in the modified primary reference through the column of cellulose based adsorbent material disclosed therein (see col. 2, line 44) in an upward direction, as disclosed by Sato, since this "up-flow hydraulics" is capable of promoting contact between this adsorbent material and the fluid undergoing treatment.

Claims 5 and 12 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Haase in view of Wieser-Linhart as applied above, and further in view of Hondroulis et al. (U.S. Patent No. 6,027,652; hereinafter "Hondroulis"). As pointed out in the previous Office action, the modified primary reference discloses the claimed invention with the exception of the use of kenaf as the cellulosic material. Hondroulis teaches (see col. 1, lines 56-60) that a wide variety of cellulosic materials, including wood and kenaf, have been used as sorbents for hazardous materials. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was

made to employ the kenaf of Hondroulis as the cellulosic starting material of Haase (see col. 13, lines 1-7), since Hondroulis teaches that this kenaf has the same adsorbent properties as the other cellulosic materials disclosed in the modified primary reference.

Claims 1, 6-9, 11, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zenno et al. (U.S. Patent No. 4,102,783; hereinafter "Zenno") in view of Wieser-Linhart. Zenno discloses removing organic contaminants which are at least slightly soluble (see col. 8, lines 52-57) from water with a natural cellulose based adsorbent (col. 2, lines2-12) packed in a column (see col. 2, line 42). Accordingly, this primary reference discloses the claimed invention with the exception of the recited composting treatment. Wieser-Linhart discloses a similar process for adsorbing organic contaminants from a liquid with a cellulose based material, and further teaches disposing of the residual material by composting. It would have been obvious to one of ordinary skill in the art at the time the invention was made to compost the spent adsorbent material of Zenno, as suggested by Wieser-Linhart, in order to dispose of this spent adsorbent material. Also, it would have been obvious to one of ordinary skill in the art at the time the invention was made to reduce over 50% of spent material in the modified primary reference, as recited in claim 11, in order to optimize disposal of this spent material.

Claim 3 is again rejected under 35 U.S.C. 103(a) as being unpatentable over Zenno in view of Wieser-Linhart as applied above, and further in view of Sato et al. The modified primary reference discloses the claimed invention with the exception of the flow direction through the column. Sato teaches that contaminated water may be passed through a column of adsorbent material in either an upward or a downward direction; and it would have been obvious to one of ordinary skill in the art at the time the invention was

made to pass the water undergoing treatment in the modified primary reference through the column of cellulose based adsorbent material disclosed therein in an upward direction, as disclosed by Sato, since this "up-flow hydraulics" is capable of promoting contact between this adsorbent material and the fluid undergoing treatment.

Claim 10 remains withdrawn from further consideration, as being directed to a non-elected species.

Claim 15 is allowed because the references of record do not teach or fairly suggest removing a contaminant comprising TNT from a fluid by passing the fluid through a column packed with kenaf, and then composting the spent kenaf.

Applicant's arguments filed September 22, 2005 have been noted and carefully considered but are not deemed to be persuasive of patentability. Applicant contends that the additional materials contained in Haase are excluded by the "consisting essentially of" language now present in claim 1. Accordingly, Applicant has the burden of showing that the introduction of additional components would materially change the characteristics of Applicant's invention (see *In re Janakirama-Rao*, 50 CCPA 1312, 317 F.2d 951, 137 USPQ 893; and *In re De Lajarte*, 337 F.2d 870, 143 USPQ 256). Absent such a showing, "consisting essentially of" will be construed as equivalent to "comprising" (*PPG*, 156 F.3d at 1355, 48 USPQ2d at 1355). See M.P.E.P. § 2111.03. The response filed September 22, 2005 presents arguments that the cationic modifier of Haase will materially change the characteristics of Applicant's invention, but these mere arguments are not deemed to constitute a showing. Furthermore, the argument that Haase teaches adding activated carbon to the cellulose material, which activated carbon would also materially change the characteristics of Applicant's invention, is not deemed

to be relevant or persuasive, since Haase clearly discloses that this activated carbon is optional (see col. 13, line 13).

Applicant also argues that Zenno discloses removing oily materials from water, and that an oily material, by definition, is insoluble in water. Again, this argument has been noted and carefully considered, but is not deemed to be persuasive of patentability. It is pointed out that petroleum products, such as crude oil, are known to exist in polluted water in free, dissolved and emulsified forms; and the oily water generated by the homogenizer of Zenno (see col. 8, lines 52-57) will inherently include some oil in dissolved form.

Dyadechko et al. (U.S. Patent No. 4,822,490) and Rose (U.S. Patent No. 5,626,748) disclose that petroleum products, such as crude oil, are known to exist in water in free, dissolved and emulsified forms (see col. 5, lines 31-34 of Dyadechko et al.; and col. 1, lines 27-29 of Rose).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is 571-272-1155. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Duane Smith, can be reached at 571-272-1166.

The centralized facsimile number for the USPTO is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ivars C. Cintins
Primary Examiner
Art Unit 1724

I. Cintins
December 11, 2005